

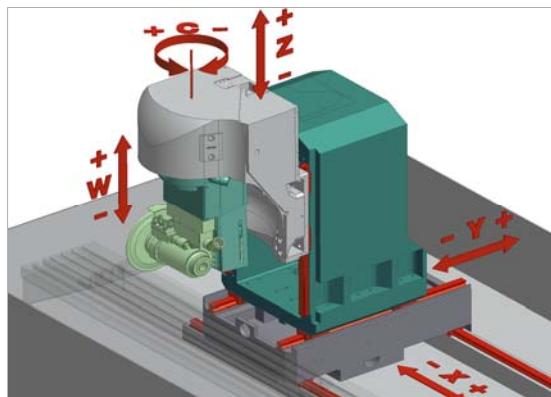
# Car Body Stamping Knife Grinding

A27-600

The grinding machine is a SCHNEEBERGER CORVUS bpp. The quick oscillating axis (W) is important for this process. In this application the machine is equipped with a magnetic plate to fix the stamping knives. The CORVUS bpp is also equipped with a dressing unit.

The cutting line of car body stamping knives can have a free 3D form. The knives do not have defined position on the magnetic plate. Therefore the position always have to be teached raw manually. Each form-direction can be teached by 3 interpolation points. For the automatic probing process, the number of probe positions between can be set in the software, typically from 0.1 to 3mm. Based on the automatic probing results the software QUINTO 5 automatically computes the tool shape.

The grinding cycle itself always starts outside the workpiece. After each pendulum motion of the W-axis



## 1. Grinding time calculation

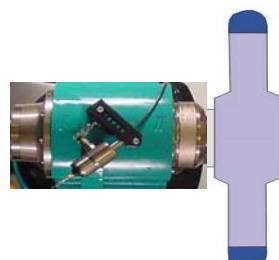
Workpiece:			
Dimension: Free form, grinding length 150mm			
Material: HSS			
Operations	Probe teach	Probe auto	Prf fin
Feed [mm/Min]	—	2000	15000
Power [kW]	—	—	4
Cutting feed [m/s]	—	—	48
Used wheels	—	—	1
Grinding time [s]	180	450	600
Total cycle time	20 Min 30 s		

The cycle times are indicative. Material to be ground, grinding wheels,

## 2. Used Grinding Wheel

1	CBN* 14F1 Ø300mm R4mm
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\* ceramic bonded



## 3. Machine and Software Requirements

Machines: 6 axes CNC grinders : CORVUS bpp

Control: Fanuc 31i

Accessories: Dressing unit, magnetic plate 1200 x 200mm

Coolant: Synthetic Oil, pressure 6 bar  
Software: Quinto 5